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INTELLECTUAL DEVELOPMENT AMONG ECONOMICALLY AND EDUCATIONALLY DISADVANTAGED YOUTH.

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CURRENT RESEARCH INDICATES THAT SCHOOL AND HOME ENVIRONMENTS STRONGLY INFLUENCE AN INDIVIDUAL'S INTELLECTUAL DEVELOPMENT, ALTHOUGH CERTAIN VERY BROAD HEREDITARY LIMITATIONS MAY ALSO AFFECT IT. THE ECONOMICALLY AND EDUCATIONALLY DISADVANTAGED YOUTH EXPERIENCES AN ENVIRONMENT WHICH LACKS STIMULI ESSENTIAL TO POSITIVE INTELLECTUAL GROWTH AND ACHIEVEMENT. FOR EXAMPLE, THE DISADVANTAGED YOUTH IS NOT EXPOSED BY HIS FAMILY TO EDUCATIONAL MATERIALS, TRAVEL EXPERIENCES, OR STANDARD LANGUAGE PATTERNS WHICH WOULD FACILITATE HIS VERBAL ABILITY OR GENERAL ACADEMIC READINESS. IN THE PHYSICALLY AND ACADEMICALLY SUBSTANDARD SCHOOLS WHICH THE DISADVANTAGED YOUTH ATTENDS, DEPRIVED CONDITIONS CAUSE AN ACTUAL DECLINE IN STUDENTS' MEASURED INTELLIGENCE AND ACHIEVEMENT AS THEY GROW OLDER. OTHER STUDIES DOCUMENT THAT WHITE CHILDREN IN DEPRIVED ENVIRONMENTS ALSO MANIFEST AN I.Q. LAG. WITH A POSITIVE CHANGE IN ENVIRONMENT, HOWEVER, THERE IS A SIGNIFICANT INCREASE IN STUDENTS' MEASURED INTELLIGENCE. THUS THE SCHOOLS MUST BE MADE LARGELY RESPONSIBLE FOR PROVIDING AN ENVIRONMENT WHICH WOULD STIMULATE THIS POTENTIAL FOR INTELLECTUAL GROWTH. TEACHER TRAINING PROGRAMS MUST SPECIFICALLY PREPARE TEACHERS TO TEACH DISADVANTAGED STUDENTS. MOREOVER, SCHOOLS NEED DYNAMIC ADMINISTRATORS WHO CAN DEMAND QUALITY EDUCATION IN THEIR SCHOOLS AND WHO WILL ELIMINATE SCHOOL SEGREGATION, WHICH NOT ONLY DEPRIVES THE NEGRO OF AN EQUAL EDUCATION BUT ALSO WARPS THE RACIAL ATTITUDES OF WHITE STUDENTS AND CAUSES THE NEGRO CHILD TO FEEL INFERIOR. THIS PAPER WAS PRESENTED AT THE DETROIT SCHOOL ADMINISTRATORS WORKSHOP, MICHIGAN STATE UNIVERSITY, EAST LANSING, MICHIGAN, AUGUST 16, 1966. (LB)

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INTELLECTUAL DEVELOPMENT AMONG ECONOMICALLY AND EDUCATIONALLY DISADVANTAGED YOUTH*

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Over the years, educators and psychologists have attempted to delineate factors that facilitate or interfere with intellectual growth. During the past ten years, even more concern has been focused on specific factors related to intellectual growth among children labeled "culturally disadvantaged," "culturally deprived," "culturally alienated," or "social isolates." Although many difficulties are faced by this population, intellectual growth or the lack thereof can be perceived as being most significant. For example, the present educational plight of poor youngsters, both from the northern and southern sections of the United States, is very much related to the lack of intellectual stimulation which brings about positive intellectual growth.

In attempting to speak about any specific population, terms not clearly delineated often cloak the discussion. "Economically and educationally disadvantaged" appears to be more appropriate when discussing poor youth than such terms as "culturally disadvantaged" or "culturally alienated." The former terms, "economically and educationally disadvantaged," can be readily delineated. If an eleven-year-old school-age male is placed at the sixth grade level, but yet, on the basis of several standardized achievement tests, we find that he is clearly functioning at a second grade level in the areas of word meaning, paragraph comprehension, arithmetic reasoning and computational skills, and teacher evaluations further indicate that this youngster is functioning at a second grade level, then this youngster can certainly be classified as educationally disadvantaged.

Likewise, if the same youngster is residing in a large urban metropolitan community in which it has been estimated that a minimal yearly income of $3,600 is necessary for a family of six to exist at a bare subsistence level, and this family with four children and parents is found to have a total income of only $2,100 per year, then this youngster surely comes from a home with a definite economic disadvantage in that community. When an elementary or secondary student is faced with both educational and economic handicaps, we can infer that the total disadvantage, over time, will lead to a deficit in intellectual growth and development.

Determinants of Measured Intelligence

Within the context of this paper, intelligence is viewed as a "developmental characteristic in that the mental age or I.Q. compares the general learning of an individual with the progress in the learning of selected samples of behavior made by representative samples of individuals at different ages" (Bloom, 1964, p. 71). Furthermore, intelligence is perceived as a construct that is highly susceptible to environmental influences. In using the term "intelligence" or more accurately "measured intelligence," no pretense is made regarding the amount of intelligence that can be accounted for by one's environment in contrast to one's hereditary background. Much attention has been given to the nature-nurture argument regarding intellectual development. For example, Bloom reports that "Woodworth (1941) estimates that 60 percent can be attributed to heredity; Newman, Freeman, and Holzinger (1937) estimate 65 to 80 percent attributable to heredity;

Burks (1928) estimates 66 percent attributable to heredity" (Bloom, 1964, p. 71). However, these are all estimates, and measurement specialists will readily assert that it is not yet possible to precisely partial out the amount of variance that can be attributed to either factor. However, most contemporary psychologists and educators acknowledge that a large portion of intellectual development is directly related to environmental factors. As a matter of fact, there is a body of data which lends increasing evidence to the argument that selected environmental factors are at least as crucial to intellectual growth as the genetic component. This point of view is presented in a well documented volume, Intelligence and Experience, by Hunt (1964). Hunt states that there is no doubt that somatic and cerebral structures are important in facilitating intellectual growth, but it has become more and more clear that experience is required for the development of those "behavioral patterns and capacities and especially for the development of those central organizations for the processing of information that is required to solve problems" (p. 65). In essence, Hunt suggests that the development of central neural processes require certain positive environmental experiences. In this regard, one's hereditary background provides a basis for the molding influence of the environment. Intelligence, then, is not an invariable fixed construct nor a predetermined entity, but rather it is a dynamic ongoing set of processes that within wide hereditary limits is "subject to innumerable experiential factors" (Pettigrew, 1965, p. 107).

Hunt provides us with data which refutes two earlier notions of the development of intelligence that were once widely accepted by

both educators and psychologists. He refers to them as "fixed intelligence" and "predetermined development." The first notion viewed intelligence as an invariable entity which was completely genetically determined. The fixed intelligence concept disregarded the role of the environment as it affected intellectual growth. However, studies on the effects of schooling and special training as related to intellectual growth are all in contrast to this point of view. Evidence will be presented later in this paper indicating more precisely the impact that special training or schooling has on intellectual development.

The predetermined development concept supported the notion that intelligence will unfold rather naturally without extreme interference from the environment since it is genetically determined. Hunt (1964) reports that the early work of Coghill (1929) and Carmichael (1926) was perceived as providing further evidence that behavior unfolds automatically in an order that is predetermined by one's hereditary background. Carmichael's early work was conducted on the salamander and frog embryo. In one study, the experimental group of embryos was anesthetized and kept in chloretone for five days. The controls (other embryos from the same egg-laying group) were placed in tap water to develop under ordinary conditions. Although the experimental embryos grew less rapidly than the controls, they showed the same general patterns of body development. When tap water embryos began to make swimming motions, Carmichael placed the experimental chloretone group in clear water, and in less than 30 minutes their

swimming was difficult to distinguish from the control group which had had free swimming for five days. Carmichael then suggested that the predetermined or genetic make-up of the frog and salamander allowed his behavior to automatically unfold. However, Hunt raises a crucial question: Did the 30-minute period suggest that the embryos required a half hour of practice or was that same length of time required to eliminate the effects of the chloretone?

The work of Spalding (1902) and Cruze (1935), studying the pecking response in chicks, both provided data to support predetermined development. Hunt suggests that the inferences drawn from early animal work and applied to theories of human development were unfortunate since current data suggests once again that a positively stimulating environment is an important aspect in all phases of human development.

It should be said, however, that the new approach to intelligence does not deny the role that heredity plays in intellectual development. However, the new view emphasizes the dramatic impact that selected environmental factors have upon the genetically determined intellectual base.

Within this paper data will be presented to indicate precisely differential environmental experiences and the differential impact that these experiences have upon intellectual growth. In most of the research studies that will be cited, the subjects involved can be categorized as being economically and educationally deprived. Furthermore, assumptions regarding the achievement process in relation to measured intelligence will be discussed. Finally, the role of the school in facilitating intellectual growth among economically and educationally disadvantaged youth will be presented.

Environment and Intelligence

Verbal ability plays a key role not only in the child's day-to-day ability to communicate effectively with parents and siblings, but is also requisite to his ability to comprehend the everyday workings of a classroom. Likewise, verbal ability is a key factor in most tests of general intelligence. Hence, Bloom suggests that an "abundant" environment would be one which includes "good models of language usage" and which encourages the development of adequate language patterns. In contrast, a "deprived" environment is one in which good models of language usage are inadequate and which, in general, does not facilitate the sort of verbal discourse that brings about adequate or school functional linguistic development.

In the disadvantaged home, not only do we find youngsters who are systematically exposed to an environment that does not bring about the kind of enriching experiences that facilitate the development of adequate language styles, but adult models often fail to provide the child with the proper assistance that brings about imaginative thinking, analytic and reflective thought when they are confronted with a problem. Logical reasoning, abstract thinking, and problem solving are the essential aspects of intellectual development and which are directly related to the ability to perform adequately on tests of intelligence. Youngsters from "abundant" environments are often presented with learning situations by parents and by their general milieu to bring about the latter processes. In essence, an "abundant" environment is one that focuses on stimulating experiences relevant to the society to which it is to be adapted. This

is not to say that disadvantaged children are not from stimulating homes. However, eight and ten children sleeping in two rooms, changing diapers of younger children, or the general confusion that is often abound in poor neighborhoods is not the sort of stimulation that facilitates positive intellectual growth.

Deutsch (1962, 1963) has taken a long look at the effects of the home environment of disadvantaged children. In economically disadvantaged homes, there often is a scarcity of objects of all types, especially books, pencils, paper, and other materials necessary for the child's habituation to tools used in the schools. Deutsch further suggests that the learned inattention resulting from being ignored at home (both parents often work) is in contrast to the "abundant" environment. If both parents are working in the abundant environment, a literate and often verbal parent substitute is placed in the home rather than slightly older children who must serve as monitors for younger siblings.

Travel experiences are also requisite to information collection and processing. In many urban and rural communities many youngsters have not had the opportunity to travel out of the confines of their immediate neighborhood. In contrast, the "abundant" environment often includes extensive travel experiences, actual travel or vicarious travel via books, television, and movies.

Since parents of children in the "deprived" environment often must work long hours, six days during each week, this cuts down the amount as well as the nature of the interaction between the adults and their children. Tired parents rarely have sufficient energy or motivation to verbally stimulate their children. This lack of verbal stimulation may

be especially critical during the early formative years. Bloom (1964) presents some interesting data which suggests that "extreme environments can have far greater effects during the early years of development than they can have in later years" (p. 72). Bloom further suggests that since intelligence is a developmental characteristic, lack of learning from one period may be difficult or impossible to make up fully in another period. However, this is an experimental question and no relevant data has fully decided this issue. Nevertheless, the lack of travel experiences and concomitant lack of appropriate stimulation is in contrast to what has been depicted as an environment favorable to intellectual growth. The poor home life of the environmentally disadvantaged, Deutsch feels, is maximized "when the child belongs to a minority group that until quite recently was not only excluded from the main stream, but was not even allowed to bathe in the tributaries" (Deutsch, 1963, p. 165).

The School as a Special Environment

As indicated above, the home setting is very important in providing the basis for later intellectual development among all children. It was further stated that this environment can serve as one that either impedes or facilitates intellectual development. The school setting can be perceived as a critical environment that can also either facilitate or impede intellectual growth.

Kenneth Clark (1965) presents strong evidence that an inferior school environment can bring about a systematic decline not only in measured intelligence but also in measured academic achievement as well. His data on achievement and intelligence were derived from Negro children

in the Harlem section of New York City. Clark asserts that the quality of education in most ghetto schools in our urban community is inferior, and the school environment itself is often one of low academic standards which provides a second-class education for disadvantaged youngsters. The data suggested that predominantly Negro school environments in the New York City area do not facilitate meaningful intellectual growth. Large class size, sub-standard staff and facilities, and low motivation on the part of teachers and the administrative staff were all common ingredients of the ghetto school. Clark found that the further Harlem students progressed in school, the larger the proportion that were "retarded" and the greater was the discrepancy between their achievement and the achievement of other children in the city. This is especially tragic since one would expect that due to school dropouts and force-outs, this selective weeding out of "poor" students would decrease rather than increase the number of retarded children as we move up the academic ladder.

Clark further states:

> In reading comprehension, the ability to understand what one is reading, 30 percent of the Harlem third grade pupils are reading below grade level, compared to 21.6 percent who are reading above. For sixth grade pupils, the story is even more dismal; there 80.9 percent of the pupils score below grade level in reading, while 11.7 percent score above, indicating a rather rapid relative deterioration in reading comprehension within three school years.
>
> Between grades three and six, word knowledge falters also; in third grade, 38.9 percent score below grade level, 18.7 percent score above; in sixth grade, 77.5 percent are below, 10.6 percent above. Arithmetic shows a similar pattern of underachievement, though figures are only available for the sixth grade (57.6 percent are below grade level in "computation," 66.6 below in "problems and concepts"). By eighth grade, three-quarters of the Harlem junior high school

students score below grade level in reading comprehension and word knowledge; in arithmetic, their performance is even more discouraging--8.38 percent are now below.

During those same grades, the pupils in Harlem slip further and further behind the achievement levels of both the city and the nation.

In I.Q. the picture is just as alarming; a sharp drop for ghetto children between third and sixth grades, with a slight improvement by the eighth grade, but still behind where they were in the third grade.

Although the ghetto's pupils show a decrease in mean I.Q. scores from the third to the sixth grade and a slight recovery by the eighth, New York City pupils as a whole show a slight, but steady, increase in I.Q. until by eighth grade they match national norms. These findings strongly suggest that for Harlem pupils I.Q. tests reflect that quality of teaching and the resulting educational achievement more than intellectual potential. . . . (pp. 120-121)

Clark further states that:

> Those who fail are shunted into classes for "children with mentally retarded development" and "opportunity" classes. Most stay in their regular classes that "meet their ability." Little is expected of them; they are rewarded for mediocre performance, and consequently accomplish increasingly less than pupils at their grade level should accomplish. . . . The schools are presently damaging the children they exist to help. (pp. 121-124)

In the above section, findings of Dr. Kenneth Clark were presented to substantiate the claims that a deprived school environment can have disadvantaging effects upon both intellectual and achievement growth. The plight of the ghetto schools in New York are not unique. Disadvantaging school communities can be found throughout both northern and southern sections of the United States. Such is the plight of many urban ghetto schools in Detroit, Philadelphia, and Chicago.

The southern school scene, if possible, is even worse. The Negro school system in Wilcox County, Alabama, is another example of a disadvantaged or deprived school community that serves Negroes only.

Looking closer at this community we see that Negro youngsters account for 85 percent of the school population with the majority of these youngsters being economically disadvantaged (the per capita income of the county is only $543 per year). Wilcox County is third among the poorest counties of Alabama and twentieth among the most destitute in the country. Fifty teachers are responsible for 15 percent or 945 white students, while 160 teachers handle 55 percent or 4,987 Negro students. Thirty-three percent of the elementary school classes for Negroes have over 40 pupils, 11 percent have more than 60 pupils, and one fourth grade teacher handles a class of 84. Another teacher in this same system has a combined third and fourth grade program with a total of 60 pupils.

The physical accommodations of the sub-standard school are marked by the Outdoor toilet accommodations of the pit-type prive stule. Libraries are non-existent in the Negro schools with insufficient copies of the most minimal basic textbooks required of all students. In this and other communities throughout the South, textbooks which have been used in more favored schools for several years (in schools reserved for white youngsters) are then sent to the Negro schools for use. Not only are disadvantaged Negro students given used equipment, but out-of-date equipment as well. Small wonder that many youngsters graduate from such communities two and three years behind grade level when they are forced to use textbooks and equipment that are so often outdated.

The predominantly Negro school community in Prince Edward County, Virginia, was and presently is another prime example of a disadvantaged

school environment. Outdoor privies, wood stoves, manual water pumps, poor educational equipment, and overcrowded conditions were all trademarks of a poor educational system. The environment was so disadvantaging that a school revolt, in the form of a student boycott, led to an important case in the Supreme Court's 1954 decision abolishing separate school systems for Negro and white youngsters.

Sufficient general data has been collected to demonstrate that school as well as home environments can be disadvantaging and have deleterious effects upon intelligence and achievement. Precisely what happens to intellectual growth when children are placed in disadvantaged environments for a long period of time?

Intelligence Decline and Environment

Several studies have found that with disadvantaged children measured intelligence tends to decrease with age. The most recent of these (Green, et al., 1964) found an I.Q. drop of 23 points (95-72) from the age of 5 to the age of 18 for groups of Negro children from Prince Edward County, Virginia, who received limited or no education during a four-year period in which the County public schools were closed.

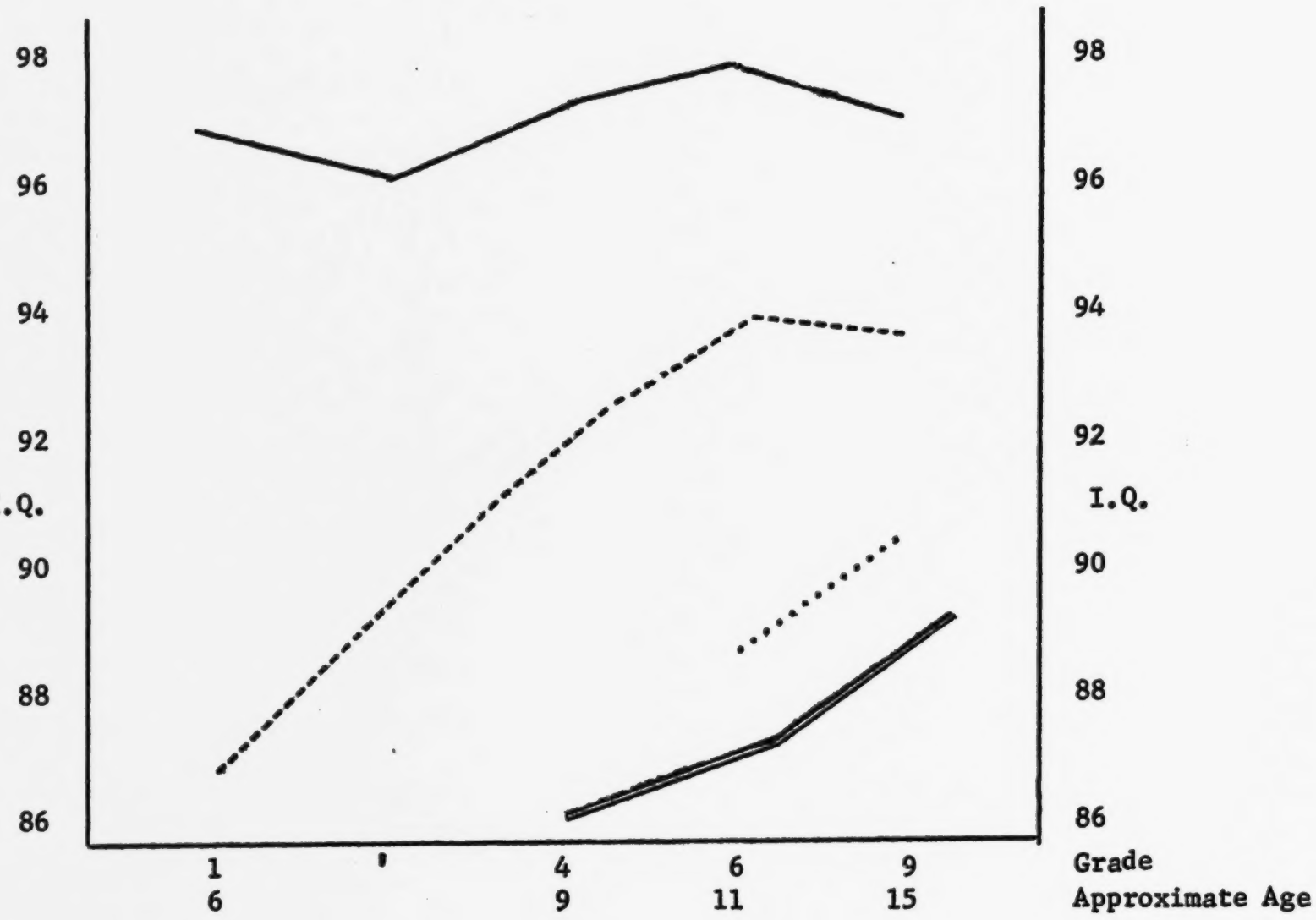
Arlitt, 1922; Higgins and Sivers, 1958; Kennedy, et al., 1961; Tomlinson, 1944; and Young and Bright, 1954, all testing intelligence at varying age levels all found the I.Q. of Negro children in less than optimal school surroundings to decrease with age. However, the phenomenon of I.Q. decline over time is not unique to Negro children. Higgins and Sivers (1958) also found the I.Q. of white children in deprived environments to decrease with age. Anastasi (1958) cites evidence that white

children in less than favorable environments in the United States experience the same I.Q. lag.

As indicated earlier, Clark found the same phenomena in the disadvantaged schools in Harlem. The apparent negative effect of schooling over time on the intellectual development of disadvantaged children is certainly contrary to what is normally expected of the educational process. The eroding effects of a poor home environment combined with a poor school environment has an unfortunate impact upon intellectual growth.

Environmental Change and Intellectual Growth

Numerous studies have demonstrated that when youngsters move from deprived to more abundant environments, intellectual growth is facilitated. The Klineberg studies (1935) provided rather strong evidence supporting the notion that improved environments will bring about an increase in measured intelligence. Klineberg demonstrated that with one group the length of residence in New York City was related to positive increases in measured intelligence. The Prince Edward County, Virginia, study demonstrated that children who had only limited education performed at a significantly higher level on tests of general intelligence than those who had no education during the period in which the schools were closed. The classic research of Lee (1951) and Kirk (1958) has shown intelligence test performance to be directly related to environmental conditions. The Lee study tested several groups of Philadelphia Negro children over time. The changes in measured I.Q. were related to environmental shifts. Children who were born in the North maintained consistent scores over time (see figure). However, children who were born in the



—— Born and raised in Philadelphia
---- Born in South and moved to Philadelphia at grade 1
═══ Born in South and moved to Philadelphia at grade 4
···· Born in South and moved to Philadelphia at grade 6

Changes in Intelligence For Negro Students Born and Raised in Philadelphia and Negro Students Born in the South and Moving to Philadelphia at Various Grades (Adapted from Lee, 1951). (Bloom, 1964)

South and moved to Philadelphia by age 6 gained an average of six I.Q. points from grades 1 to 9, though they did not reach the I.Q. level of the first group. Children who were born in the South and did not move North until grade 6 (age 10 or 11) gained only two I.Q. points from grades 6 through 9. Of significance in the Lee study was the decreasing effect of the improved environment over time. The longer the youngsters remained in an extremely disadvantaging environment, the smaller the measured intelligence gain.

It should be noted here that factors other than a disadvantaging environment account for I.Q. decline over time. The increasing verbal nature of many of our tests of general intelligence places children with verbally impoverished backgrounds at a real disadvantage. Once again, our school-oriented tests tap factors that receive a premium in the early home environment of the "abundant" child without assessing the "deprived" child on his non-school-related learning.

Kirk studied two groups of institutionalized mentally retarded children in a longitudinal study. The experimental group was given a preschool experience with a strong educational component. Both groups were tested prior to the preschool experience and at the end of the preschool experience and once again several years later. Those with the preschool experience showed graduate increases in measured intelligence over time while the experimental group (without the preschool treatment) showed a gradual decline in measured intelligence.

The above studies suggest that positive I.Q. change is related to positive environmental change. This environmental change, however, must provide the child with enriching and stimulating experiences, heretofore

absent from his experiential world. However, in the studies presented, the environmental changes that brought I.Q. growth were by-products of a family move. They were not environmental changes planned by educators. Yet education and educators must play a vital role in stimulating all youngsters in order to maximize their intellectual and achievement growth.

Education and Intellectual Growth

Evidence has been presented throughout this paper indicating that although one's hereditary background may set certain undefinable limits on intellectual growth, the environment plays a crucial role in its development. Several studies suggested that both the home and school settings are the most crucial environments in most youngsters' lives. Although educators cannot always restructure a basically unhealthy home environment, there is much that they can and should do to reshape a school or learning environment that does not facilitate positive intellectual development.

It has been observed time and time again that an important factor related to teacher effectiveness in disadvantaged schools is the training that is available to prospective teachers in many of our colleges of education (Green, 1966). Although the urban communities are serving an increasingly large number of educationally and economically disadvantaged youth, very few teacher training institutions provide instruction that speaks precisely to many of the educational deficiencies of disadvantaged youth. Forty to seventy-five percent of the elementary school population in the core city of most of our large metropolitan areas is likely to be disadvantaged. Witness the city of Detroit and other large urban

communities in Michigan. Yet, among the three largest teacher-training institutions in the State of Michigan, very few courses are specifically oriented towards teaching disadvantaged youth. One large teacher-training institution does not have one course at the undergraduate level of this nature. When a teacher has completed four years of the elementary education curriculum at these institutions, she is often unprepared to face disadvantaged children, many of whom have serious problems in addition to an intellectual deficit. Unfortunately, many new teachers are the recipients of a first assignment in schools that are economically and educationally disadvantaged. Courses should be structured in our teacher-training institutions that focus on the special learning problems of disadvantaged youth, such as the relevance of intelligence test scores in assessing educational readiness. Unfortunately, many teachers perceive a score on an I.Q. test as a precise predictor of future performance. They are unaware of the fact that with disadvantaged youth most intelligence tests are a better measure of the effects of a past disadvantaging environment rather than predictors of future achievement. One study (Green and Farquhar, 1965) found no correlation between high school grades and performance on a verbal aptitude test for Negro male high school students. Evidence such as this may help restructure the basically unhealthy attitude which suggests to teachers that "these youngsters cannot learn."

In the late 1950's a number of teachers in the New York public school system told white student interviewers assigned by Dr. Kenneth Clark that Negro children are inherently inferior in intelligence and

therefore cannot be expected to learn as much or as readily as white children; and that all one would do, if one tried to teach them as if they could learn, would be to develop in them serious emotional disturbances, frustrations, and anxieties (Clark, 1965). With proper attitudes and more effective teaching approaches, most youngsters can learn.

In addition, there are many home-related deficiencies that can be dealt with effectively in a school setting. It has been noted here that many disadvantaged youth emanate from home settings in which the language patterns that are developed are non-functional in an academic setting. Beginning at the kindergarten and first grade level, teachers can focus on many remedial experiences that are enriching for disadvantaged youth via photographs, pictures, slides, and field trips. The latter activities can bring about the experiential background from which language can be developed. Such experiences can be readily pinpointed in teacher-training courses. The work of the Banneker Project in St. Louis, Missouri, has indicated that such enriching experiences can bring about rapid achievement gains on the part of the youngsters involved. The most critical factor here once again is the attitude that many teachers hold toward poor youth. We can no longer afford to hide behind the youngster's poor background as an excuse for not providing quality instruction. If we assume that a youngster cannot learn because he is from a poor background and then fail to provide adequate instruction, surely he will not learn; a self-fulfilling prophesy. We must begin to require all personnel in disadvantaged schools to function at a level even higher than that required for less unfortunate middle-class schools. In the

latter, articulate parents demand a high level of teacher performance, and they have the power to enforce their demands. Witness the strong PTA groups in middle class schools. However, the sometimes voiceless, powerless parent of the disadvantaged youth is at the mercy of teachers, administrators, and school boards. Therefore, the school itself must demand an excellent educational effort when economically and educationally disadvantaged youth are being taught.

Not only is a fresh and progressive attitude on the part of teachers toward poor youth important, but we must begin to inaugurate in our teacher-training programs clearing houses to supply professors at colleges of education with the latest information on experimental programs that are being structured for poor youth. When it is found that a given program is facilitating more rapid intellectual and achievement gains, steps should be taken to see that this information is made available to students. This may allow teacher-trainees to become aware of which teaching techniques are likely to be most functional.

With the rapidly changing urban school community, the teacher training role of professors in colleges of education should be carefully assessed. No longer can one rest comfortably within the ivy tower of the university and maintain an accurate understanding of the complexities involved in teaching economically and educationally disadvantaged youth. The time has come when those who are closely involved in training elementary and secondary teachers should themselves become actively involved in the instructional process at the public school level. Precisely, they should consider teaching (once every three or

four years) for a semester or a year in a fourth grade elementary or a ninth grade civics class, for example. If the professor is primarily research oriented, what would make a better laboratory than the classroom itself? Very seldom do we involve ourselves in systematic day-to-day observation of pupil behavior in order to determine its relationship to the learning process.

Finally, even though teachers may acquire the necessary skills and training that will allow them to work effectively with disadvantaged youth, skills and ability alone are not enough. One must have a desire to work with poor youngsters. If the teacher has the ability but not the desire, she will most likely become one of the many dissatisfied on the urban teaching scene.

It has often been said that the learning climate of the school is directly related to the school administrator. School administrators who themselves work hard will often not tolerate lazy and non-motivated teachers in their building. Likewise, administrators who very seldom visit classrooms, who are more concerned with polished floors and faces in contrast to effective teaching, contribute to intellectual lag. Once again, this is especially critical in ghetto schools. However, there is a special problem here. There are teachers who perceive an assignment to an integrated school as an academic affliction (Green, 1966). Often school administrators contribute to this perception by assigning poorly qualified teachers to ghetto schools. The cafeteria joke often centers around the teacher who asks for a promotion and is assigned to a particular ghetto school on the other side of the tracks. School

administrators could offset such negative attitudes by stressing the professional challenge of teaching in poor areas. For example, the attitude can be fostered that the informational gap that is so much a part of the life of poor youngsters can be an asset rather than a handicap from a teaching standpoint. Youngsters who are not filled with information, if properly motivated, will often respond to new and stimulating experiences. In addition, consultative assistance by special school area consultants should be made available to assist teachers in working with youngsters who are experiencing critical learning deficiencies. However, it must be stressed over and over that these youngsters can learn. Strong evidence of this comes from the many Negroes, Jews, and Irish professionals who all emanated from disadvantaged environments. A significant number of our school teachers, both Negro and white, are from less than middle-class environments, and many of them emanate from environments that can readily be categorized as disadvantaged, and yet they learned.

Administrators must demand that poor schools get their share of equipment, books, and supplies. In the southern part of the United States today Negro teachers are called upon to raise money through baking or cooking parties in order to buy basic educational equipment. Often they are compelled to purchase needed school supplies from their salaries. In our northern urban communities, the latter practice is not in effect. However, even in the North, it is well known that new audio-visual equipment and other prized school commodities usually find their way to poor schools last.

Finally, it must be stated that the inequalities that exist in many of our educational programs are directly related to school

segregation. As a matter of fact, it is not possible for a Negro child to receive quality education in an all-Negro school, and likewise it is not possible for a white child to receive quality education in an all-white segregated school. Basic education extends far beyond the cognitive development that can be brought about in a well-planned curricula and instructional program. Positive attitudinal development is equally important. When Negro and white pupils are segregated in school programs very early in life, they soon develop the perception that each must be different. There are many other factors operative in our society which allow this attitude of being "different" to center around feelings of inferiority on the part of the Negro child and superiority on the part of the white child (Green, 1966). It was mentioned earlier in this paper that segregated Negro schools never receive their fair share of equipment, quality teachers, and all the other ingredients that comprise quality education. We can no longer sit back and assert that segregated schools are a result of segregated neighborhoods. The Berkeley, California, school system has found that segregated neighborhoods need not be an obstacle to integrated education. The responsibility of the school administrator in this regard is of the utmost importance.

Throughout this paper, determinants of intellectual growth among economically and educationally disadvantaged youth were identified and discussed. Paramount among the factors identified as being significantly related to intellectual growth was the general learning environment of disadvantaged youth. Specifically, the role of the school as a specific determiner of the growth process was assessed. The school as a special

learning environment can and must play an important role in offsetting the early effects of stimulus deprivation related to school learning. Finally, both positive intellectual and achievement growth are brought about more efficiently in an integrated school environment.

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